



ATTORNEY DOCKET NO.: EMC00-28(00163)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Allan L. Scherr  
Serial No.: 09/784,381  
For: METHODS AND APPARATUS FOR PROVIDING SECURITY FOR A  
DATA STORAGE SYSTEM  
Filing Date: February 15, 2001  
Examiner: Son, Linh D.  
Art Unit: 2135  
Conf. No.: 3942

---

Certificate of Mailing Under 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: **MAIL STOP RCE**, Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450 on:

Date: July 8, 2005

By: Farah Z. Frasco  
(Typed or printed name of person mailing  
Document, whose signature appears below)

Signature: Farah Z. Frasco

---

**MAIL STOP RCE**  
Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

**TRANSMITTAL LETTER**

Sir:

Enclosed is/are:

- 2 -

- [x] Transmittal Letter (this form, 3 pages, in duplicate), Total Pages: 6;
- [x] Petition for One Month Extension of Time (2 pages, in duplicate), Total Pages: 4;
- [x] Request for Continued Examination (RCE) Transmittal, Total pages: 1;
- [x] A copy of the Amendment filed on May 9, 2005, Total Pages: 23;
- [x] Return Receipt Pre-paid Postcard (in duplicate), Total Postcards: 2;
- [x] Authorization to charge Deposit Account No. 50-0901, if necessary;
- [x] Check in the amount of \$910.00, with fee amounts calculated as follows:

	<b>Claims Remaining After Amendment</b>	<b>Highest No. Previously Paid For</b>	<b>Present Extra</b>	<b>Rate</b>	<b>Additional Fee</b>
Total Claims	30	- 31	0	X \$50.00	= \$0.00
Independent Claims	12	- 12	0	X \$200.00	= \$0.00
Request for Continued Examination (RCE) Fee					= \$790.00
One Month Extension of Time Fee					= \$120.00
<b>TOTAL ADDITIONAL FEES</b>					<b>= \$910.00</b>

Applicant hereby petitions for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

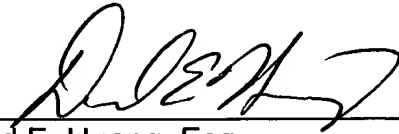
U.S. Application No.: 09/784,381

Attorney Docket No.: EMC00-28(00163)

- 3 -

If the enclosed papers or fees are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (508) 366-9600, in Westborough, Massachusetts.

Respectfully submitted,



David E. Huang, Esq.  
Attorney for Applicant  
USPTO Registration No.: 39,229  
CHAPIN & HUANG, L.L.C.  
Westborough Office Park  
1700 West Park Drive  
Westborough, Massachusetts 01581  
Telephone: (508) 366-9600  
Facsimile: (508) 616-9805

Attorney Docket No.: EMC00-28(00163)

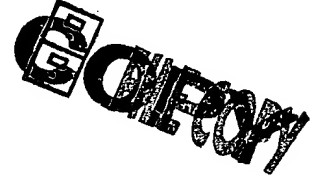
Dated: July 8, 2005



ATTORNEY'S DOCKET NO.: EMC00-28(00163)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Allan L. Scherr  
Serial No.: 09/784,381  
For: METHODS AND APPARATUS FOR PROVIDING SECURITY FOR A  
DATA STORAGE SYSTEM  
Filing Date: February 15, 2001  
Examiner: Son, Linh L. D.  
Art Unit: 2135  
Conf. No.: 3942



**Certificate of Mailing Under 37 C.F.R. §1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:  
**MAIL STOP AF**, Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450 on:

Date: May 9, 2005

By: Farah Z. Frasco  
(Typed or printed name of person mailing  
Document, whose signature appears below)

Signature: Farah Z. Frasco

**MAIL STOP AF**  
Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

**AMENDMENT**

Sir:

In response to the Office Action mailed March 9, 2005, please amend the above-identified Application as follows:

## IN THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the Application:

LISTING OF CLAIMS:

1. (Currently Amended) A data storage system for accessing a set of data, comprising:
  - a data access manager for establishing a plurality of tokens for accessing the set of data;
  - a network connection in communication with the data access manager; and
  - a data storage assembly in communication with the network connection, the data storage assembly comprising (i) a set of storage locations that stores the set of data, and (ii) a control circuit configured to:
    - receive from a host in communication with the data access manager over the network connection (i) ~~a request~~ a device oriented, block based command to access the set of data and (ii) a first access token of the plurality of tokens that provides access to the set of data stored in the set of storage locations in the data storage system;
    - generate an authorization signal that controls access to the set of data based on the first access token and a second access token of the plurality of tokens, the second access token associated with the set of storage locations, by performing a comparison of the first access token to the second access token associated with the set of storage locations,
    - if the comparison indicates that the first access token and the second access token are identical, produce an access approval signal that provides access to the set of storage locations; and
    - if the comparison indicates that the first access token and the second access token are not identical, produce an access failure

signal that indicates a denial of access to the set of storage locations; and

produce a response signal that provides a response to the ~~request~~ device oriented, block based command over the network connection to the host based on the authorization signal.

2. (Cancelled)
3. (Currently Amended) The data storage system of claim 1, wherein the data access manager comprises a processor and a memory that stores a data access manager application, wherein the processor operates in accordance with instructions of the data access manager application stored in the memory to establish the plurality of tokens for accessing the set of data, and wherein the instructions of the data access manager application configure the processor to:
  - associate, prior to receiving the first access token, the second access token with the set of storage locations in response to an initial ~~request~~ device oriented, block based command from the host to store the set of data;
  - allocate the set of storage locations in the data storage assembly to receive the set of data in response to the ~~request~~ device oriented, block based command to store the set of data, while tagging each storage location with the second access token; and
  - provide to the host the set of storage locations and the first access token based on the second access token.
4. (Currently Amended) The data storage system of claim 3, wherein the data access manager application comprises further instructions that configure the processor to:
  - generate, prior to associating the second access token with the set of storage locations, an initial access token of the plurality of tokens in response to the initial ~~request~~ device oriented, block based command to store the set of data in

the data storage system;

provide a first copy of the initial access token as the first access token to the host over the network connection; and

provide a second copy of the initial access token as the second access token to the data storage assembly.

5. (Currently Amended) The data storage system of claim 1, wherein the ~~request~~ device oriented, block based command is one of a read request to read data from at least one of the set of storage locations and a write request to write data to at least one of the set of storage locations.
6. (Original) The data storage system of claim 1, wherein the network connection is a local area network such that the data storage system forms a storage area network.
7. (Currently Amended) In a data storage system having a set of storage locations, a method for accessing a set of data stored in the set of storage locations, comprising the steps of:
  - receiving from a host (i) ~~a request~~ a device oriented, block based command to access the set of data stored in the set of storage locations and (ii) a first access token that provides access to the set of data stored in the set of storage locations;
  - generating an authorization signal that controls access to the set of data based on the first access token and a second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,
    - if the comparing step indicates that the first access token and the second access token are identical, producing an access approval signal that provides access to the set of storage locations; and
    - if the comparing step indicates that the first access token and the

second access token are not identical, producing an access failure signal that indicates a denial of access to the set of storage locations; and producing a response signal that provides a response to the ~~request~~ device oriented, block based command to the host based on the authorization signal.

8. (Cancelled)
9. (Currently Amended) The method of claim 7, further comprising the steps of:
  - prior to the step of receiving the first access token, associating the second access token with the set of storage locations in response to an initial ~~request~~ device oriented, block based command from the host to store the set of data;
  - allocating the set of storage locations in the data storage assembly to receive the set of data in response to the initial ~~request~~ device oriented, block based command to store the set of data, while tagging each storage location with the second access token; and
  - providing to the host the set of storage locations and the first access token based on the second access token.
10. (Currently Amended) The method of claim 9, further comprising the steps of:
  - prior to the step of associating the second access token with the set of storage locations, generating an initial access token in response to the initial ~~request~~ device oriented, block based command to store the set of data in the data storage system; and
  - providing a first copy of the initial access token as the first access token to the host that initiates the ~~request~~ device oriented, block based command; and
  - providing a second copy of the initial access token as the second access token.
11. (Currently Amended) The method of claim 7, wherein the step of receiving the first access token and the ~~request~~ device oriented, block based command



comprises receiving one of a read request to read data from at least one of the set of storage locations and a write request to write data to at least one of the set of storage locations.

12. (Original) The method of claim 7, wherein the data storage system is a storage area network comprising a data access manager and at least one data storage assembly comprising storage devices.
13. (Currently Amended) A computer program product that includes a computer readable medium having instructions stored thereon for accessing a set of data, such that the instructions, when carried out by a data storage system having a set of storage locations storing the set of data, cause the data storage system to perform the steps of:
  - receiving from a host (i) ~~a request~~ a device oriented, block based command to access the set of data stored in the set of storage locations and (ii) a first access token that provides access to the set of data stored in the set of storage locations;
  - generating an authorization signal that controls access to the set of data based on the first access token and a second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,
  - if the comparing step indicates that the first access token and the second access token are identical, producing an access approval signal that provides access to the set of storage locations; and
  - if the comparing step indicates that the first access token and the second access token are not identical, producing an access failure signal that indicates a denial of access to the set of storage locations; and
  - produce a response signal that provides a response to the ~~request~~ device oriented, block based command to the host based on the authorization signal.

14. (Currently Amended) A data storage assembly for accessing a set of data, comprising:
- a set of storage locations that stores the set of data; and
  - a control circuit in communication with the set of storage locations, the control circuit configured to:
    - receive from a host in communication with the control circuit over a network connection (i) ~~a request~~ a device oriented, block based command to access the set of data and (ii) a first access token that provides access to the set of data stored in the set of storage locations;
    - generate an authorization signal that controls access to the set of data based on the first access token and a second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,
      - if the comparison indicates that the first access token and the second access token are identical, produce an access approval signal that provides access to the set of storage locations; and
      - if the comparison indicates that the first access token and the second access token are not identical, produce an access failure signal that indicates a denial of access to the set of storage locations; and
    - produce a response signal that provides a response to the ~~request~~ device oriented, block based command over the network connection to the host based on the authorization signal.
15. (Cancelled)
16. (Currently Amended) The data storage assembly of claim 14, wherein the ~~request~~ device oriented, block based command is one of a read request to read data from at least one of the set of storage locations and a write request to write data to at least one of the set of storage locations.

17. (Currently Amended) In a data storage assembly having a set of storage locations, a method for accessing a set of data stored in the set of storage locations, comprising the steps of:
- receiving from a host (i) ~~a request~~ a device oriented, block based command to access the set of data stored in the set of storage locations and (ii) a first access token that provides access to the set of data stored in the set of storage locations;
  - generating an authorization signal that controls access to the set of data based on the first access token and a second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,
  - if the comparing step indicates that the first access token and the second access token are identical, producing an access approval signal that provides access to the set of storage locations; and
  - if the comparing step indicates that the first access token and the second access token are not identical, producing an access failure signal that indicates a denial of access to the set of storage locations; and
  - producing a response signal that provides a response to the ~~request~~ device oriented, block based command to the host based on the authorization signal.
18. (Cancelled)
19. (Currently Amended) The method of claim 17, wherein the step of receiving the first access token and the ~~request~~ device oriented, block based command comprises receiving one of a read request to read data from at least one of the set of storage locations and a write request to write data to at least one of the set of storage locations.

20. (Currently Amended) A computer program product that includes a computer readable medium having instructions stored thereon for accessing a set of data, such that the instructions, when carried out by a data storage assembly having a set of storage locations that store the set of data, cause the data storage assembly to perform the steps of:
- receiving from a host (i) ~~a request~~ a device oriented, block based command to access the set of data stored in the set of storage locations and (ii) a first access token that provides access to the set of data stored in the set of storage locations;
  - generating an authorization signal that controls access to the set of data based on the first access token and a second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,
  - if the comparing step indicates that the first access token and the second access token are identical, producing an access approval signal that provides access to the set of storage locations; and
  - if the comparing step indicates that the first access token and the second access token are not identical, producing an access failure signal that indicates a denial of access to the set of storage locations; and
  - producing a response signal that provides a response to the ~~request~~ device oriented, block based command to the host based on the authorization signal.
21. (Currently Amended) A host for requesting access to a set of data stored in a set of storage locations in a data storage system, comprising:
- a memory comprising a host application;
  - an input/output controller; and
  - a processor in communication with the memory and the input/output controller, wherein the processor operates in accordance with instructions of the host application stored in the memory to request access to the set of data, and the instructions of the host application configure the processor to:

generate a ~~request~~ a device oriented, block based command to access the set of data stored in the set of storage locations;

provide through the input/output controller to the data storage system the ~~request~~ device oriented, block based command to access the set of data and a first access token that provides access to the set of storage locations; and

obtain through the input/output controller from the data storage system a response signal that provides a response to the ~~request~~ device oriented, block based command based on the first access token and a second access token associated with each storage location.

22. (Currently Amended) The host of claim 21, wherein the ~~request~~ device oriented, block based command is one of a read request to read data from at least one of the set of storage locations and a write request to write data to at least one of the set of storage locations.

23. (Currently Amended) In a host, a method for requesting access to a set of data stored in a set of storage locations in a data storage system, comprising the steps of:

generating a ~~request~~ a device oriented, block based command to access the set of data stored in the set of storage locations;

providing the ~~request~~ device oriented, block based command to access the set of data and a first access token that provides access to the set of storage locations; and

obtaining a response signal that provides a response to the ~~request~~ device oriented, block based command based on the first access token and a second access token associated with each storage location.

24. (Original) The method of claim 23, wherein the step of providing the first access token and the ~~request~~ device oriented, block based command comprises providing one of a read request to read data from at least one of the set of storage locations and a write request to write data to at least one of the set of storage locations.
25. (Currently Amended) A computer program product that includes a computer readable medium having instructions stored thereon for requesting access to a set of data stored in a set of storage locations in a data storage system, such that the instructions, when carried out by a computer, cause the computer to perform the steps of:
- generating a ~~request~~ device oriented, block based command to access the set of data stored in the set of storage locations;
  - providing the ~~request~~ device oriented, block based command to access the set of data and a first access token that provides access to the set of storage locations; and
  - obtaining a response signal that provides a response to the ~~request~~ device oriented, block based command based on the first access token and a second access token associated with each storage location.
26. (Currently Amended) A data access system for providing access to a set of data, comprising:
- a host comprising (i) a memory having a host application, (ii) an input/output controller, and (iii) a processor in communication with the memory and the input/output controller, wherein the processor operates in accordance with instructions of the host application stored in the memory to request access to the set of data;
  - a network connection in communication with the host; and
  - a data storage assembly in communication with the network connection, the data storage assembly comprising (i) a set of storage locations that stores the set of data, and (ii) a control circuit, wherein:

the processor of the host operates in accordance with the host application to provide to the data storage assembly through the input/output controller of the host and the network connection (i) ~~a request~~ a device oriented, block based command to access the set of data and (ii) a first access token of a plurality of tokens that provides access to the set of data stored in the set of storage locations in the data storage assembly;

the control circuit of the data storage assembly is configured to receive over the network connection (i) the ~~request~~ device oriented, block based command to access the set of data and (ii) the first access token provided by the host;

the control circuit is configured to generate, in response to receiving the ~~request~~ device oriented, block based command and the first access token, an authorization signal that controls access to the set of data based on the first access token and a second access token of the plurality of tokens, the second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,

if the comparing step indicates that the first access token and the second access token are identical, producing an access approval signal that provides access to the set of storage locations; and

if the comparing step indicates that the first access token and the second access token are not identical, producing an access failure signal that indicates a denial of access to the set of storage locations; and

the control circuit is configured to produce a response signal that provides a response to the ~~request~~ device oriented, block based command over the network connection to the host based on the authorization signal.

27. (Currently Amended) The data access system of claim 1, further comprising a data access manager in communication with the network connection, the data access manager comprising a processor and a memory that stores a data access manager application, wherein the processor operates in accordance with instructions of the data access manager application stored in the memory to establish the plurality of tokens for accessing the set of data, and wherein the instructions of the data access manager application configure the processor to:
- associate, prior to receiving the first access token, the second access token with the set of storage locations in response to an initial ~~request~~ device oriented, block based command from the host to store the set of data;
  - allocate the set of storage locations in the data storage assembly to receive the set of data in response to the initial ~~request~~ device oriented, block based command to store the set of data, while tagging each storage location with the second access token; and
  - provide to the host the set of storage locations and the first access token based on the second access token.
28. (Currently Amended) In a data access system having a host and a data storage assembly having a set of storage locations, a method for providing access to a set of data stored in the set of storage locations, comprising the steps of:
- providing to the data storage assembly from the host (i) ~~a request~~ a device oriented, block based command to access the set of data and (ii) a first access token of a plurality of tokens that provides access to the set of data stored in the set of storage locations in the data storage assembly;
  - generating, in response to receiving the ~~request~~ device oriented, block based command and the first access token, an authorization signal that controls access to the set of data based on the first access token and a second access token of the plurality of tokens, the second access token associated with the set of storage locations, by comparing the first access token to the second access token associated with the set of storage locations,



if the comparing step indicates that the first access token and the second access token are identical, producing an access approval signal that provides access to the set of storage locations; and

if the comparing step indicates that the first access token and the second access token are not identical, producing an access failure signal that indicates a denial of access to the set of storage locations; and

producing a response signal that provides a response to the request device oriented, block based command from the data storage assembly to the host based on the authorization signal.

29. (Currently Amended) The method of claim 1, wherein the data access system further comprises a data access manager, and the method further comprises the steps of:

associating, prior to receiving the first access token, the second access token with the set of storage locations in response to an initial request device oriented, block based command from the host to the data access manager to store the set of data;

allocating the set of storage locations in the data storage assembly to receive the set of data in response to the initial request device oriented, block based command to store the set of data, while tagging each storage location with the second access token; and

providing to the host from the data access manager the set of storage locations and the first access token based on the second access token.

30. (Cancelled)

31. (Currently Amended) The data storage system of claim [[30]] 1 wherein the device oriented, block based command comprises a SCSI command, the control circuit is configured to receive the SCSI command via non-channel communications using a transport protocol.

32. (Cancelled)

33. (Previously Presented) The data storage system of claim 1 wherein,

when receiving, the control circuit is configured to receive from the host in communication with the data access manager over the network connection the first access token of the plurality of tokens that provides access to the set of data stored within a range of disk addresses in the set of storage locations of the data storage assembly, the range of disk addresses distinct from file names associated with the set of data; and

when generating, generate an authorization signal that controls access to the set of data based on the first access token and a second access token of the plurality of tokens, the second access token associated with the range of disk addresses in the set of storage locations.

34. (Currently Amended) The host of claim 21 wherein the instructions of the host application configure the processor:

when providing, provide through the input/output controller to the data storage system the ~~request~~ device oriented, block based command to access the set of data and a first access token that provides access to a range of disk addresses in the set of storage locations of the data storage assembly, the range of disk addresses distinct from file names associated with the set of data; and

when obtaining, obtain through the input/output controller from the data storage system a response signal that provides a response to the ~~request~~ device oriented, block based command based on the first access token and a second access token associated with the range of disk addresses in the set of storage locations.

35. (Currently Amended) A data storage system for accessing a set of data, comprising:

a data access manager for establishing a plurality of tokens for accessing the set of data;

a network connection in communication with the data access manager; and

a data storage assembly in communication with the network connection, the data storage assembly comprising (i) a set of storage locations that stores the set of data, and (ii) a control circuit configured to:

receive from a host in communication with the data access manager over the network connection (i) ~~a request~~ a device oriented, block based command to access the set of data and (ii) a first access token of the plurality of tokens that provides access to the set of storage locations within a range of disk addresses in the set of storage locations in the data storage system, the range of disk addresses distinct from file names associated with the set of data;

generate an authorization signal that controls access to the set of storage locations based on the first access token and a second access token of the plurality of tokens, the second access token associated with the range of disk addresses in the set of storage locations; and

produce a response signal that provides a response to the ~~request~~ device oriented, block based command over the network connection to the host based on the authorization signal.

36. (New) The data storage system of claim 1 wherein:

the set of storage locations of the data storage assembly comprises a range of disk addresses that stores the set of data, the control circuit configured to:

receive from the host in communication with the data access manager over the network connection (i) the device oriented, block based command to access the set of data and (ii) a first access token of the

plurality of tokens that provides access to the set of data stored in the range of disk addresses;

generate the authorization signal that controls access to the set of data based on the first access token and a second access token of the plurality of tokens, the second access token associated with the set of storage locations, by performing a comparison of the first access token to the second access token associated with the set of storage locations,

if the comparison indicates that the first access token and the second access token are identical, produce the access approval signal that provides access to the range of disk addresses; and

if the comparison indicates that the first access token and the second access token are not identical, produce the access failure signal that indicates a denial of access to the range of disk addresses.

REMARKS

In response to the Office Action mailed March 9, 2005, Applicant respectfully requests reconsideration. To further the prosecution of this Application, Applicant submits the following remarks, has canceled claims and has added new claims. Applicant prays that, after consideration of these remarks, a favorable decision will be provided regarding the claims. The claims as now presented are believed to be in allowable condition.

Claims 1, 3-7, 9-14, 16-17, and 19-35 were pending in this Application. By this Amendment, claims 1, 3-5, 7, 9-11, 13, 14, 16, 17, 19-23, 25-29, 31, 34, and 35 have been amended, claim 32 has been canceled, and claim 36 has been added. Accordingly, claims 1, 3-7, 9-14, 16-17, 19-31, and 33-36 are now pending in this Application. Claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35 are independent claims and the remaining claims are dependent claims.

Claim Amendments

Independent claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35 have been amended to include subject matter of previously examined claim 30. Subject matter relates to the host transmitting a device oriented, block based command to access the set of data. The amendments do not add new matter to the application. Accordingly, the Applicant has not raised any new issue that would require further searching and consideration.

Dependent claims 3-5, 9-11, 16, 19, 22, 24, 27, 29, and 34 have been amended to address antecedent basis issues raised by the amendments to the independent claims. Dependent claim 31 has been amended to address an antecedent basis issue raised by cancellation of claim 30.

Rejections under 35 U.S.C. §103

Claims 1, 3-7, 9-14, 16-17, and 19-35 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,506,961 to Carlson et al. (hereafter Carlson).

The Applicant asserts that the present claimed invention is not anticipated by any disclosure in Carlson. Reconsideration of the rejection is respectfully requested.

In order to establish a *prima facie* case of obviousness, the Office Action must meet three criteria.

“First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.”<sup>1</sup>

Carlson relates to the authorization of peer-to-peer connections.<sup>2</sup> In Carlson, to obtain information required by a user and/or an application program, a client connection manager issues a request to a system authorizer.<sup>3</sup> Furthermore, in Carlson,

[s]ince the client application may or may not know the location of the desired information, the request may or may not include the address of a server device (i.e., the client connection manager will not provide the address of a server device when the location of the information is unknown to it). When the system authorizer receives the request, it first verifies that the client device is who it claims to be. The system authorizer then identifies the applicable server device by using either the address provided by the client connection manager or the information contained in the request. If the system authorizer determines that the client device should be allowed to access the information on the subject server device, it then sends a token to the server device and a copy of the same token to the client device...

Upon receipt of the token copy from the system authorizer, the client connection manager packages the token copy into a message that it sends to the server device. When the server connection manager receives the message from the client device, it compares the token copy to the token it received from the system authorizer. If the tokens match, the server connection manager responds to the client device and the connection is established. If the tokens do not match, the server connection manager notifies the system authorizer of the failed connection attempt and then proceeds to inform the client device.<sup>4</sup>

---

<sup>1</sup> *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

<sup>2</sup> Carlson, col. 1, l. 11-12.

<sup>3</sup> Carlson, col. 3, l. 56-58.

<sup>4</sup> Carlson, col. 3, l. 58 – col. 4, l. 21 (emphasis added).

The request message in Carlson has a format that includes a client resource ID field, a server resource ID field, an information ID field, and an access rights field.<sup>5</sup> The server resource ID field “is an optional field that contains location information about the server device. The field could be included in the message if the location of the requested information is known to the client device.”<sup>6</sup>

The Applicant’s amended independent claims 1, 7, 13, 14, 17, 20 and 35 generally include, as an element, receiving “from a host in communication with the data access manager over the network connection (i) a device oriented, block based command to access the set of data and (ii) a first access token of the plurality of tokens that provides access to the set of data stored in the set of storage locations in the data storage system”. Claims 1, 7, 13, 14, 17, 20 also generally include, as an element, producing “a response signal that provides a response to the device oriented, block based command over a network connection to the host based on an authorization signal”.

The Applicant’s amended independent claims 21, 23, and 25, generally include, as an element, generating “a device oriented, block based command to access the set of data stored in the set of storage locations”. The Applicant’s amended independent claims 26 and 28, generally include, as an element, providing to the data storage assembly from the host (i) a device oriented, block based command to access the set of data and (ii) a first access token of a plurality of tokens that provides access to the set of data stored in the set of storage locations in the data storage assembly.

The Office Action has not established a *prima facie* case of obviousness with respect to the Applicant’s independent claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35 because Carlson does not teach or suggest all of the claim limitations of claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35.

As indicated above, for authorization of peer-to-peer connections (e.g., to obtain information required by a user and/or an application program), Carlson describes a client connection manager as issuing a request to a system authorizer. Carlson recites the request, as provided by the host, as optionally including a server resource ID field that

---

<sup>5</sup> Carlson, col. 7, l. 45-47.

<sup>6</sup> Carlson, col. 7, l. 50-54 (emphasis added).

indicates location information about the server device. The request in Carlson is not, however, a device oriented, block based command to access a set of data, as claimed by the Applicant in independent claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35.

As indicated by the Applicant's specification, and as is known in the art, device-oriented, data block based communications (e.g., conventional SCSI communications) are based upon a read or write command directed to a **range of disk addresses** on a specific data storage device.<sup>7</sup> While Carlson teaches of a host sending a request that may or may not include location information about the server device, Carlson does not teach or suggest the use of a device oriented, block based command (e.g., as directed to a **range of disk addresses**) to access the set of data stored by the storage device.

For example, assume a case where the request in Carlson does not include a server resource ID field, as the field is optional. Because the request does not indicate a location of a particular storage device, the request would not include a range of disk addresses. In such a case, the request in Carlson is clearly not a block based request as claimed by the Applicant in independent claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35.

In another example, assume a case where the request in Carlson does include a server resource ID field. While the server resource ID field of the request indicates a location of a particular storage device, the request is not a device oriented, block based command as claimed by the Applicant. Carlson merely teaches of the request having the server resource ID field as identifying a location of a particular storage device. Carlson does disclose or suggest the request as requesting data directed to a **range of disk addresses** on the specific data storage device. As such, the request in Carlson is not a device oriented, block based command as claimed by the Applicant in independent claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35.

If the rejection of claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35 are to be maintained, the Applicant respectfully requests that it be pointed out with particularity where Carlson teaches a device oriented, block based command to access a set of data.

---

<sup>7</sup> Applicant's Specification, p. 3, l. 20-22.



Because Carlson does not teach or suggest every element of the Applicants' independent claims 1, 7, 13, 14, 17, 20, 21, 23, 25, 26, 28, and 35, the claims are patentable over Carlson and should be allowed to issue. Accordingly, the rejection of these claims should be withdrawn. Claims 3-6, 27, 29, 30, 33, and 36 which depend on claim 1, claims 9-12, which depend upon claim 7, claim 16, which depends upon claim 14, claim 19 which depends upon claim 17, claims 22 and 34 which depends upon claim 21, claim 24, which depends upon claim 23 should also be allowed to issue as depending upon allowable independent claims (i.e., for at least the reasons presented). Reconsideration of the rejection is respectfully requested.

#### Newly Added Claims

Claim 36 has been added and is believed to be in allowable condition. Claim 36 depends from claim 1. Support for claim 1 is provided within the Specification, for example, on page 8, line 22 through page 9, line 2. No new matter has been added.

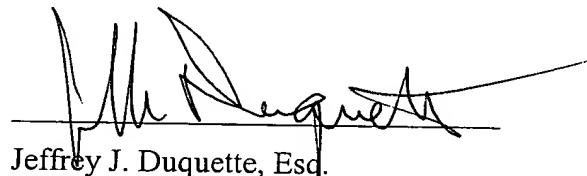
Conclusion

In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after this Response, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' Representative at the number below.

Applicant hereby petitions for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 366-9600, in Westborough, Massachusetts.

Respectfully submitted,



Jeffrey J. Duquette, Esq.  
Attorney for Applicant  
Registration No.: 45,487  
CHAPIN & HUANG, L.L.C.  
Westborough Office Park  
1700 West Park Drive  
Westborough, Massachusetts 01581  
Telephone: (508) 366-9600  
Facsimile: (508) 616-9805

Attorney Docket No.: EMC00-28(00163)

Dated: May 9, 2005